PRIMEDIC™
by SPACELABS HEALTHCARE

HeartSave AED Trainer

Operating instructions

MGA23560 / GB / B02

Masthead

Publisher

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Proprietary note

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!   The PRIMEDIC™ HeartSave AED Trainer is no active defibrillator and is therefore not suitable for the therapy to patients.   **!**

1 Introduction HeartSave AED Trainer

1.1 Foreword

Dear User,

You are preparing to face the task of learning to perform a competent training demonstration of the safe use of **PRIMEDIC™ HeartSave AED Trainer** . The HeartSave AED Trainer you have acquired is **not** a defibrillator, but is to be used solely for educational purposes and must not be used on patients.

The training device provides a variety of training scenarios to provide the user with the necessary knowledge of the HeartSave in combination with the ERC / ILCOR Guidelines 2010.

A PRIMEDIC ™ HeartSave AED Trainer is clearly identified by "coach" printed on both sides on the side surfaces and on the nameplate. In addition, the HeartSave AED Trainer is basically, after turning on, recognized as a training device with voice output **< Attention Training Device >**.

Keep these operating instructions near the device so that you consult any queries which may arise.

For questions regarding the device or other PRIMEDIC ™ products, we are happy to help.

1.2 Validity

The descriptions in these operating instructions refer to the PRIMEDIC ™ Heart Save AED Trainer made by METRAX GmbH.

1.3 Intended use

The PRIMEDIC™ HeartSave AED Trainer may only be used as described and under the conditions detailed in these operating instructions.

Any use above or beyond this is not considered as intended use and can lead to personal injury or damage to property.

1.4 Guarantee

The warranty period is 24 months and starts on the day of purchase. Please keep the invoice as proof of purchase.

The general guarantee and warranty provisions of METRAX GmbH are applicable.

Any repairs or changes to the device may only be carried out by the manufacturer or by a person or company authorised by the manufacturer.

1.5 Disclaimers

Liability claims in the event of damages to people or property are excluded if they are based on one or more of the following reasons:

- Using the device in a manner for which it was not intended.
- Improper use and maintenance of the device.
- Operating the device with the protective covers removed or when there is obvious damage to cables and/or electrodes.
- Non-compliance with the instructions in these operating instructions with regard to operation, maintenance and repair of the equipment.
- Using accessories and spare parts made by other manufacturers.
- Autonomous intervention, repairs or constructional changes to the device.
- Autonomous overrunning of the performance limits.
- Lack of monitoring parts that are subject to wear and tear.
- Treating patients without prior indication.

2 Description of device

2.1 Description of device details

Fig. 1: Front View (similar)

(1)   Status display

(2)   Strap to pull the cover off the device (with expiry date of SavePads)

(3)   Carry handle

(4)   Cover of the device

Fig. 2: Rear View (Similar to)

(1)   Specification plate

(2)   Fixing for wall mounting

Fig. 3: Bottom view (with power module)

(1)   Release button power module

(2)   Power module

Fig. 4: Front View (similar)

(1)   Pediatric button

(2)   Jack for electrode connectors

(3)   Connector symbol with LED

(4)   Electrode symbol with LED

(5)   On/Off switch

(6)   "Do not touch patient" symbol (lights up during ECG analysis)

(7)   Loudspeaker

(8)   Shock button (release button for defibrillation)

(9)   Language change button (When a training device without function)

Fig. 5: PRIMEDIC™ SavePads Trainer

(1)   Cover of the device

(2)   Utensil carrier

(3)   SavePads Trainer with packaging
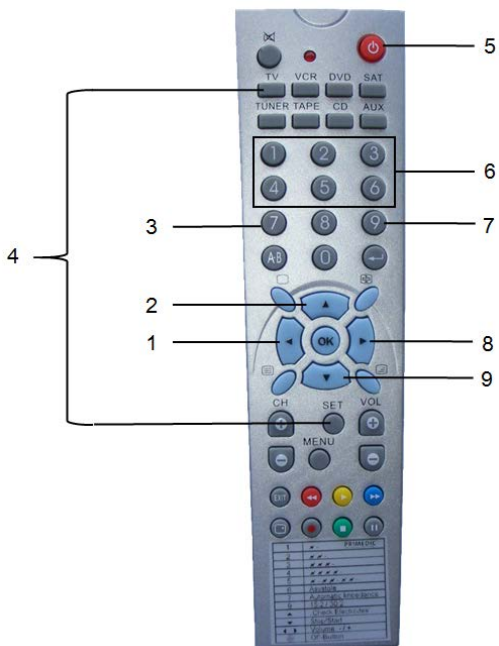
Fig. 6: Remote Control

(1)   Reduce volume   (6)   Scenario buttons

(2)   Impedance on/off   (7)   Changeover 15:2 / 30:2

(3)   Automatic impedance   (8)   Increase volume

(4)   Programming buttons for equipment   (9)   Scenario pause
       code

(5)   Off button

2.2 Description of the accessories

2.2.1 SavePads Trainer Electrodes

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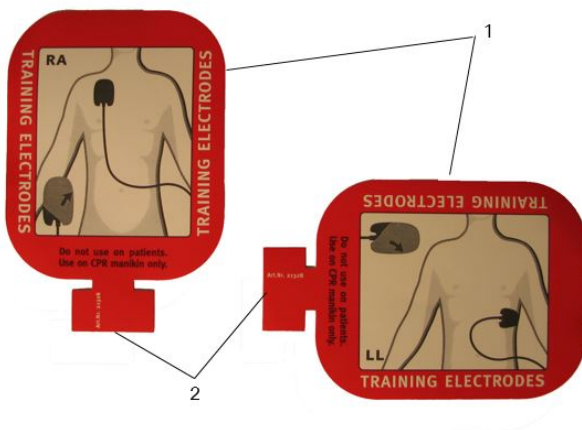
Fig. 7: PRIMEDIC™ SavePads Trainer

(1)   Training Electrode with Protective Film

(2)   Mounting Tab

2.2.2 SavePads Trainer Cable
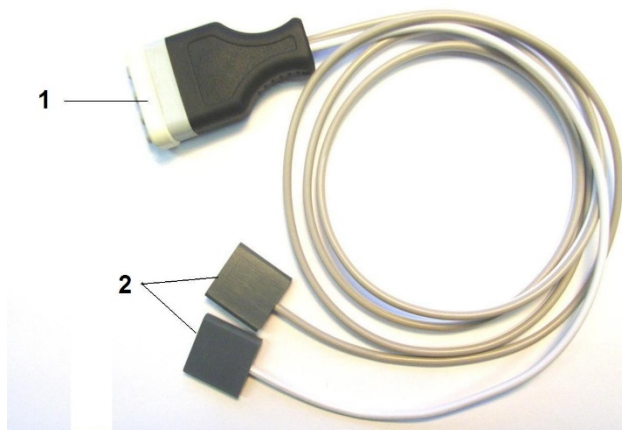
Fig. 8: PRIMEDIC™ Trainer cable

(1)   Connector Side of the Device

(2)   Adapter for SavePads Trainer Electrodes

| Note | Additionally added to the PRIMEDIC ™ Heart AED are nitrile gloves, a razor, a ventilation cloth and a pair of scissors. |

2.2.3 Accessories

- PRIMEDIC™ Trainer Energy Module DD / AS; Order No.: 96696
- PRIMEDIC™ TrainerCable AS/DD for trainer electrodes; Order No.: 97185
- PRIMEDIC™ SavePads Trainer Electrodes; Order No.: 96551 (50 pairs)
- PRIMEDIC™ SavePads Trainer Electrodes re-usable (1 pair),
  Order No.: 97350
- PRIMEDIC™ Remote Control AED Trainer DD, AS and ONE, Order No.: 97614

3   Preparatory measures before (initial) start-up

3.1   Unpacking

After delivery, first of all check the packaging and the device for transport damage.

If you notice any damage to the device, immediately contact your transport company, dealer or directly contact technical services at METRAX GmbH, stating the serial number and describing the damage to the device.

Convince yourself that the scope of delivery is complete in accordance with the enclosed delivery note.

Scope of delivery:

- HeartSave AED Trainer
- Power Module for HeartSave Trainer DD/AS
- SD-Card
- Operating instructions
- SavePads Training Electrodes (5 Pair)
- SavePads Training Cable
- Remote Control Trainer DD/AS/ONE

3.2   Inserting / Replacing the Batteries in the Power Module

The PRIMEDIC ™ Heart Save AED Trainer can be used with commercially available alkaline batteries or AA batteries.

Before the first use of the PRIMEDIC ™ Heart Save AED Trainer you must first insert the batteries / rechargeable batteries in the battery compartment.
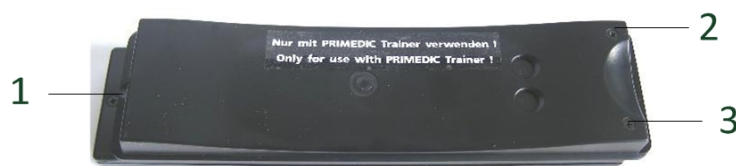
Fig. 9: Power Module, Closed

The lid of the power module is closed by three Phillips screws (1, 2, 3).

Fig. 10: Power Module Open

▶ The six batteries / rechargeable batteries are inserted into the lower tray. Pay attention to the correct polarity!

3.3 Inserting / replacing the energy module

3.3.1 Inserting the power module
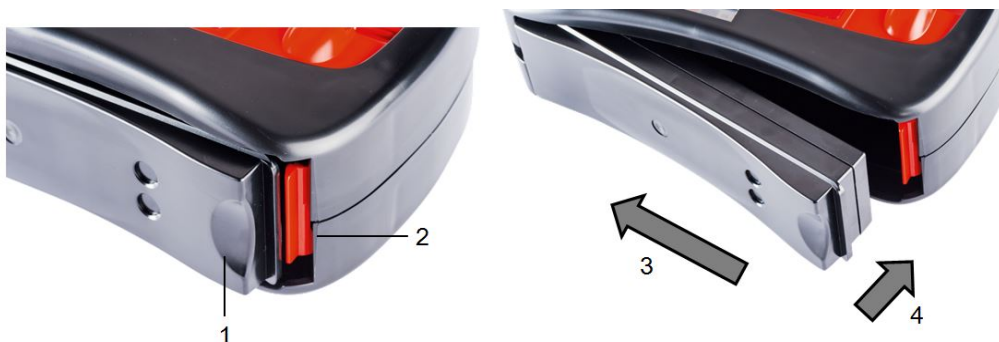
Fig. 11: Removing the power module

Procedure:

▶ Lay the device on its back.

▶ Push the (new) battery (1) in the direction of the arrow (3) into the device until it reaches its end position as shown in the diagram.

▶ Then press the battery in the direction of the arrow (4) into the power module slot until the release button (2) locks the power module tongue securely into position.

▶ Press the battery completely into the device until you hear the "click" when it slots into place and the battery
is flush with the outside edge of the device.

▶ After this, the device will carry out a self-test and is ready to use.

3.3.2 Removing the power module from the device
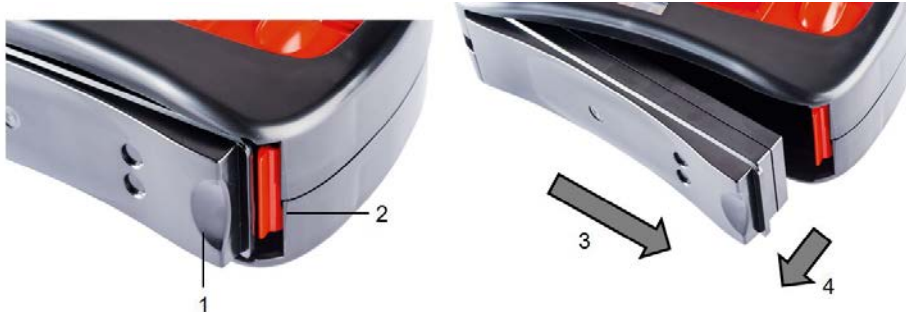
Fig. 12: Removing the battery

Procedure:

▶ Lay the device on its back.

▶ Press the release button (2) far to the right as far as the power module tab is unlocked and the power module (1) snaps out from the bay.

▶ Twist the power module slightly in the direction of the arrow (4) and then pull it in the direction of the arrow (3) out of the device.

3.4 Inserting / replacing the SD card

Fig. 13: Inserting / replacing the SD-card

To remove or change to the SD card, you must first remove the power module.

Procedure:

▶ Insert the SD card into the card slot.

Note	Make sure that the contacts on the SD card show upwards!

Note	The training device starts only with SD card inserted. If it is not loaded, after turning on all LEDs will light up.

3.5 Entering the Device Code for Remote Control

For the operation of the remote control, 2 batteries AAA size are needed. Please note that after each battery change the device code of the remote control must be re-entered.

▶   Push and hold the "SET" button

▶   Press the "TV" - button until the red LED lights up permanently.

▶   Release both buttons again

▶   Enter "1 6 0".

Following this the red LED goes out and the remote control is ready for operation.
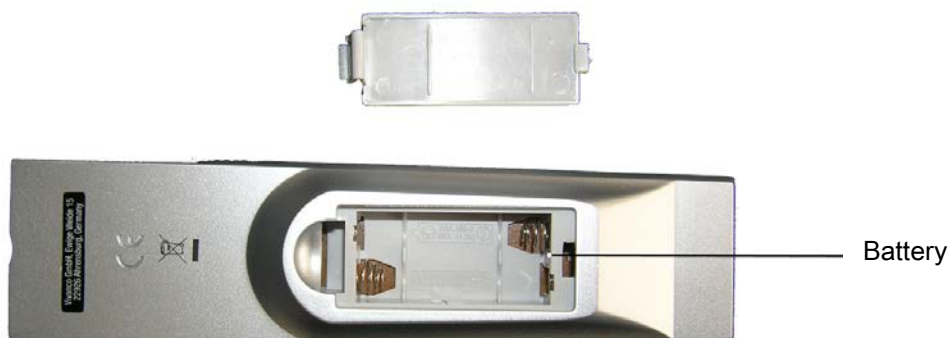
Battery

Fig. 14: Remote Control – Installing the Batteries

4 Using the device

To operate the PRIMEDIC ™ HeartSave AED trainer the remote control is required.

4.1 Enable / Disable the PRIMEDIC™ HeartSave AED Trainer

4.1.1 Turn on the PRIMEDIC™ HeartSave AED Trainer

The device is automatically activated by removing its cover. If no device cover is used or if the unit does not turn on automatically, turn it on by pressing the On / Off button.

Standby is confirmed by a beep. It is important to ensure that the loudspeaker is working.

4.1.2 Turn off the PRIMEDIC™ HeartSave AED Trainer

The PRIMEDIC ™ Heart AED Trainer can be turned off in several ways:

- By pressing the on/off button for approx. 3 seconds. A warning beep will sound simultaneously. This time has been chosen to avoid it being switched off accidentally.
- By pressing the "power button" on the remote control

4.2 Resuscitation Sequence

4.2.1 Selection of Resuscitation-Scenarios

The PRIMEDIC ™ Heart Save AED Trainer offers various so-called resuscitation scenarios that will help you to realize different resuscitation procedures during training.

By pressing the keys 1-6 you can switch back and forth between several scenarios. The selected scenario is announced by corresponding beeps and starts automatically. If a scenario is not selected after the power-on tone, the trainer starts with scenario 1

The unit automatically starts in adult mode.

▶ Press the Pediatric Button to enter Pediatric Mode.

The selected mode is signalized via the Voice Output **< Adult Mode >**or**< Pediatric Mode >** and the LED of the Pediatric Button.

The following pre-programmed scenarios are available:

#	Symbol	Description	Resuscitation Sequence
1	⚡~	Begin resuscitation (BLS) 1 Defibrillation Required Not requiring defibrillation rhythm	Begin resuscitation Analyse, Shock required 2 min CPR* Analyse, No shock required
2	⚡⚡~	Begin resuscitation (BLS) 2 Defibrillations needed Not requiring defibrillation rhythm	Begin resuscitation Analyse, Shock required 2 min CPR Analyse, Shock required 2 min CPR Analyse, No shock required
3	⚡⚡⚡~	Begin resuscitation (BLS) 3 Defibrillations needed Not requiring defibrillation rhythm	Begin resuscitation Analyse, Shock required 2 min CPR Analyse, Shock required 2 min CPR Analyse, Shock required 2 min CPR Analyse, No shock required
4	⚡⚡⚡⚡~	Begin resuscitation (BLS) 4 Defibrillations needed Not requiring defibrillation rhythm	Begin resuscitation Analyse, Shock required 2 min CPR Analyse, Shock required 2 min CPR Analyse, Shock required 2 min CPR Analyse, Shock required 2 min CPR Analyse, No shock required
5	⚡~⚡⚡~⚡⚡~	Begin resuscitation (BLS) 1 Defibrillation Required Not requiring defibrillation rhythm 2 Defibrillations needed Not requiring defibrillation rhythm 2 Defibrillations needed Not requiring defibrillation	Begin resuscitation Analyse, Shock required 2 min CPR Analyse, No shock required 2 min CPR Analyse, Shock required 2 min CPR Analyse, Shock required

#	Symbol	Description	Resuscitation Sequence
		rhythm	2 min CPR
			Analyse, No shock required
			2 min CPR
			Analyse, Shock required
			2 min CPR
			Analyse, Shock required
			2 min CPR
			Analyse, No shock required
6	Patient with Asystole	Begin resuscitation (BLS)	Begin resuscitation
		Not requiring defibrillation rhythm	Analyse, No Shock required

* CPR (Cardio Pulmonary Resuscitation) = HLW (Cardiopulmonary resuscitation)

Note	The scenario can be interrupted by pressing the ▼ key on the keyboard. When pressing the ▼ key again, the scenario is continued at the same place.

4.2.2 Pediatric Mode

In barrel mode, there is the possibility to adjust the relationship between cardiac massage and ventilation to 30:2 or 15:2.

Changing the ratio between cardiac massage and ventilation:

▶ Pressing the 9 button (7) changes from 15:2 / 30:2

Note	Ratio 30:2 → 2 x Beep
	Ratio 15:2 → 1 x Beep
	The ratio can be changed for Pediatric Mode! The voice announcement 30 x chest compressions is then replaced by 15 x chest compressions.
	The setting is stored until the power module is removed, the next time the trainer uses the last setting.

Note	During the analysis is not possible to change the mode

Note	The setting is saved until the energy module is removed.

Note	The Voice Announcement **< Chest compressions >** during the energy charging is omitted in Pediatric Mode.

4.2.3 Conditions for the Start of the Analysis

By using training pads on electrically non-conductive resuscitation dolls the PRIMEDIC ™ Heart Save AED Trainer cannot automatically start the analysis, when the user electrodes are adhered to the dolls. Therefore, the instructor must simulate the electrode contact during training.

▶ Press the ▲ button on the remote control (impedance on/off) to simulate the first electrode contact.

The device then automatically starts the analysis, provided the training cord is plugged in.

▶ Pushing the button ▲ again switches patient impedance off again. This simulates the electrodes falling off.

4.2.4 Automatic start of analysis

You can set the HeartSave AED Trainer in such a way that the analysis starts automatically. In this case the patient impedance must not be added using the remote control.

Proceed as follows to activate this function:

▶ Push the button 7 (3) on the remote control. If the automatic patient impedance is activated, the HeartSave AED Trainer emits a rising tone sequence.

Proceed as follows to de-activate this function:

▶ Push the button 7 (3) on the remote control. If the automatic patient impedance is de-activated, the HeartSave AED Trainer emits a falling tone sequence.

Note	The setting is saved until the energy module is removed.

4.2.5 Adapting the volume of the metronome

You can adapt the volume of the metronome by pushing the button (1) or (8) during the metronome phase. The volume of the voice messages is not affected by this.

Note	The setting is saved until the energy module is removed.

5 ERC/AHA Guideline 2010

5.1 Voice output of the device

After the self-test has been successfully performed by the device, the following BLS-language instruction (BLS = Basic Life Support) is issued:

<Adult mode>

< Call emergency services >

After that the following voice prompt is issued for a period of **one minute**:

< Apply electrodes one after the other to patient's bare chest >

If the Electrode plug is not yet inserted in the device, the audio prompt will be issued for **one minute**:

< Apply electrodes one after the other to patient's bare chest >

< Plug in electrode cable >

If, up to this point the device does not detect any patient impedance, because the ▲ button on the remote is not pressed yet, there are instructions for **one** cycle for cardiopulmonary resuscitation (CPR):

< Give 30 chest compressions >

< Give 2 rescue breaths >

Afterwards the device will give instructions to attach the electrodes for maximum one minute. This process is continued until the device, a first electrode pad (corresponding to the actual case of a valid patient impedance) is signalled. By pressing the ▲ button on the remote control.

< Analysing rhythm, Do not touch the patient >

5.1.1 Defibrillation necessary:

< Shock advised >

< chest compressions > (voice message omitted in Pediatric Mode)

< Stand clear of patient >

< Press lit shock button now >

5.1.2 Defibrillation is not necessary:

< No shock advised >

5.2 Cardio pulmonary resuscitation

After the analysis or shock, application the device requests cardio pulmonary resuscitation. This consists of **five (seven)** CPR cycles consisting of 30 chest compressions and two breaths. The necessary actions will be announced by corresponding voice messages **in the first** cycle:

< Cardio pulmonary resuscitation >

< Give 30 chest compressions > (< Give 15 chest compressions >)

< Give 2 rescue breaths >

After the spoken message, 30 bleeps will follow during the chest compressions at the recommended frequency of 100 compressions / minute. The rescue breaths are also supported by an appropriate sound signal. From the second to fifth CPR cycle, only these sound signals are emitted.

5.3 Message < Check electrodes >

The instructor can simulate the waste of an electrode by pressing the ▲ button on the remote control.

In this case, the device repeats the following voice messages:

< Check electrodes >

< Apply electrodes one after the other to patient's bare chest >

If the plug on the PRIMEDIC™ SavePads Trainer has not been inserted in the unit, the following additional instruction appears

< Plug in electrode cable >

These voice instructions to be repeated for the duration of one minute. If the device has not re-signalled a good electrode contact before this time, there are instructions for five (seven) cycles for cardiopulmonary resuscitation:

< Give 30 chest compressions > (< Give 15 chest compressions >)

< Give 2 rescue breaths >

Afterwards, the device will once again give instructions to attach the electrodes for a maximum period of one minute. This process is continued until the device signals a good electrode contact and begins the rhythm analysis.

6 Cleaning

⚠ **WARNING**
Warning: physical harm to user
Risk of electrocution
▶ Only clean the device when switched off
▶ Do not immerse the device in liquids
▶ Use damp cloths to clean

Clean HeartSave AED Trainer and all its accessories with commercially available household cleaners.

Use a slightly damp, clean cloth. Use ordinary surface disinfectants to disinfect (e.g. Gigasept FF, Bacillol or Spitacid).

7 Disposal

In accordance with the founding principles of the company Metrax GmbH, your product has been developed and made using high quality materials and components which are recyclable.

At the end of its service life, recycle the device through disposal companies registered under public law (council recycling facilities). Proper disposal of this product helps with environmental protection.

Through the registration of Metrax GmbH with the responsible authorities we ensure that disposal and recycling of electrical devices introduced by us onto the market in accordance with the EU Directive on the disposal of waste electrical and electronic equipment (WEEE directive) is guaranteed.

In Germany, in accordance with the law on bringing electrical and electronic equipment onto the market, taking it back and disposing of in an environmentally friendly manner

(Electrical and Electronic Equipment Act– ElektroG) Metrax is registered with EAR (register of old electronic equipment) under the number: 25658828.

Incorrect disposal of the device or its individual parts can lead to injury.

For business customers in the European Union

Please contact your dealer or supplier if you want to dispose of electrical and electronic equipment. Your dealer or supplier will have further information available for you.

8 Technical Data

Power supply

Battery	6 x AA alkaline batteries (for the PRIMEDIC ™ HeartSave AED Trainer)
	2 x AAA alkaline batteries (for remote control)
	alternatively, commercially available batteries
Operating time	min. 20 h with standard alkaline batteries

Other

Operating conditions	0°... 55°C, 30... 95 % rh. Humidity, but without condensation 500 hPa ... 1060 hPa continuous operation
Storage conditions	- 20 ... 70 °C, 20 ... 95 % rel. Humidity, but without condensation 500 hPa ... 1060 hPa
Dimensions	28 x 25 x 9 cm (W x D x H)
Weight:	approx. 1.5 kg

Subject to change without notice.

9   Warranty conditions

The warranty period is 24 months and starts on the day of purchase. Please keep the invoice as proof of purchase.

Within this time period, METRAX GmbH will remedy any defects in the device free of charge if they are based on material or manufacturing faults. The device can be reinstated to its original condition as selected by METRAX GmbH either by repair or replacement.

A claim made under warranty does not extend the original warranty period.

Defects for insignificant impairment of usefulness, of natural wear and tear (for example, wear parts such as AkuPak LITE) or damage arising after the transfer of risk from faulty or negligent handling, excessive strain or from particular external influences that the claimed contract are not covered under the guarantee. The same applies if inappropriate changes or incorrect repair work is carried out by the buyer or by a third party.

All other claims on METRAX GmbH are excluded, unless such claims are based on intent or gross negligence or compulsory legal liability standards.

Warranty claims made by the buyer against the seller (dealer) are not affected by this guarantee.

In the case of a warranty claim, please return the device, with proof of purchase (e.g. invoice) stating your name and address, to your dealer or to METRAX GmbH.

METRAX After-Sales Service is glad to be at your disposal, even after the warranty period has expired.

About Us

Metrax GmbH has been in the business of service to medical technology for more than 40 years, and produces professional and automated external defibrillators for professionals and the layman of compromise-free high quality. Well-engineered and safe technology, simple operation, high quality and absolute reliability under extreme conditions. Those are the unmistakable characteristics of PRIMEDIC defibrillators.

OSI Systems took over Metrax GmbH in October 2014. The PRIMEDIC defibrillators supplements the product range of Spacelabs Healthcare (medical technology division of OSI Systems) in the field of patient monitoring and cardiology

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